



Research Methodology in Aerobiology

Dr. Jyoti Jagannath Kshirsagar



NSSR-5

VASANTDADA PATIL ARTS, COMMERCE & SCIENCE COLLEGE, PATODA.

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INTERNATIONAL PUBLICATIONS

KANPUR-208021

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02.00 PM	B.Sc-II		

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About the Author

Dr. Jyoti Jagannath Kshirsagar, M.Sc. Ph.D., She is working as Head, Department of Botany, Vasantdada Patil College, Patoda Dist-Beed (Maharashtra) India. Recognition as a Research Guide in Faculty of Science in Botany Dr. Babasaheb Marathwada University Aurangabad (M.S.) India. She is a brilliant academic career with extensive research, professional experience and U.G., & P.G., teaching experience. She has attended and presented research papers at various state, national and international seminars. She has published many research papers in the journals of national and international repute.

About the Book

Aerobiology is a branch of biology that studies organic particles, such as bacteria, fungal spores, very small insects, pollen grains and viruses, which are passively transported by the air. Aerobiologists have traditionally been involved in the measurement and reporting of airborne pollen and fungal spores as a service to allergy sufferers. Aerobiologists often work closely with medical doctors, plant pathologists, mycologists and meteorologists. Aerobiological observations are used in many other disciplines: palynology (the study of dust), ecology, botany, phenology, climatology, meteorology and forensics. Aerobiology plays a fundamental role in the transmission of infectious diseases. As infectious disease and infection control practitioners continue employing contemporary techniques (e.g., computational fluid dynamics to study particle flow, polymerase chain reaction methodologies to quantify particle concentrations in various settings, and epidemiology to track the spread of disease), the central variables affecting the airborne transmission of pathogens are becoming better known. Aerobiology is a multidisciplinary field. Careers mostly involve sampling air quality and public health, immunology research, environmental protection or agriculture. Research and forecasting organisations around the world advise the general population and the medical and farming industries, and many commercial companies are developing allergen detectors or products to counter the symptoms of allergies. The book highlights the importance of method comparison and validation in bioaerosol research and the benefits that the application of novel techniques could bring to increasing the understanding of aerobiological phenomena in diverse research fields, particularly during the progression of atmospheric transport, where complex interdependent physicochemical and biological processes occur within bioaerosol particles.

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International Publications

Publishers & Distributors

6A/540, Avas Vikas, Hanspuram

Kanpur-208 021

Email : internationalpub09@yahoo.com

Website : www.internationalpublication.in

ISBN 978-93-90775-15-6



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